UNITED STATES PATENT AND TRADEMARK OFFICE

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SUITER SWANTZ PC LLC		CHOW, JEFFREY J
14301 FNB PARKWAY SUITE 220		
OMAHA, NE 68154-5299		

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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/786,264	BOGER, ROBERT A.
	Examiner	Art Unit	
	Jeffrey J. Chow	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 November 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-45</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-45</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413)
                                                        Paper No(s)/Mail Date. _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)   5) ☐ Notice of Informal Patent Application
      Paper No(s)/Mail Date _____ .   6) ☐ Other: _____ .

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1 – 37, filed 27 October 2006, have been

considered but are moot in view of the new ground(s) of rejection.

Applicant argues that Iwaki's (US 6,567,097) MUX cannot implement a command to

change the mode of operation between interlaced and noninterlaced modes of operation (page

23). The claim limitation recites, "a microprocessor for receiving commands from said host

computer system, said microprocessor comprising control logic for switching said display

apparatus between said interlaced and noninterlaced modes of operation in response to said

commands." Song discloses MCU 9 that controls switcher A 7 and switcher B, in where the

switchers control which mode the display is displaying. The MCU is in communication with the

switchers (Figure 1). The MUX in Iwaki's system would replace the Switchers in Song's system

as one unit. Iwaki discloses MUX 106 that takes in both interlaced and non-interlaced data

(Figures 1, 8, and 11). The operation of the Iwaki's system is to adjust the input of the display

monitor depending on the mode of the display monitor (Summary of invention). The limitation

of the microprocessor in the claims requires receiving commands from said host computer

system. The combination of Song's system and Iwaki's system would have the MCU 9 being

the host computer system that sends a command to the MUX 106. The limitation of the

microprocessor in the claims requires the microprocessor comprising control logic for switching

said display apparatus between said interlaced and noninterlaced modes of operation in response

to said commands. Song's system already allows the operation of switching between interlaced

and noninterlaced modes for the monitor. Replacing the switches with a MUX would read on

this limitation. The MUX receives command from the MCU to drive which signal to the display

device, in where the different signal from the outputted from the MUX would switch the mode of

operation of the display device.

Applicant promptly argues that Ersoz does not disclose positioning the overlay window

anywhere on the screen (page 24). Ersoz discloses the inset picture can be displayed in many

different positions (column 4, line 8 – 15 and Figure 1(c)) and that it is inherent that a user, at

least a programmer, can position the inset window anywhere on the screen, even if the computer

handles the positioning of the window, it's the user that controls the computer to function. It

would have been obvious to allow user to position the overlay window anywhere on the screen.

One would be motivated to do so because this would allow the user to not block important

information that could be under the overlay window while displaying additional information on

the overlay window.

Examiner will note that the Application number and the reply to the office action date in

the headings on the Remarks document are incorrect.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

Claims 38, 40, 42, and 44 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one skilled in the

relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The added limitation "wherein the overlay window is displayed on at least one overlay screen that is positionable anywhere over at least one underlying screen as desired by a user" is new matter. The original specification mentioned overlay windows (page 14, line 3 – page 15, line 16) but that it is "being positionable anywhere" and "as desired by a user" and having an "underlying screen".

Claims 39, 41, 43, and 45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The added limitation "wherein the display apparatus permits the utilization of other computer functions on at least one underlying screen of the overlay window" is new matter. The original specification mentioned overlay windows (page 14, line 3 – page 15, line 16) but not that the "display apparatus permits the utilization of other computer functions" and that computer functions are useable during overlay mode and having "underlying screen of the overlay window".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 – 3, 8, 9, 12 – 14, 23, 24, 27, 28, 38 and 40 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Song et al. (US 6,046,721) in view of Iwaki (US 6,567,097) and

Ersoz et al. (US 5,287,189) and Mastronardi (US 2002/0126141) and Hallberg (US 6,417,867).

Regarding claim 1, Song describes a display that is used to display both a non-interlaced

computer signal and an interlaced television signal. The display automatically configures itself

to the source of the signals applied to the display (column 9, line 47 – column 10, line 26). The

display also responds to user input via buttons S101 and S102 of figure 8. Thus, the user

commands the display to be in one mode or another by having either the computer send a display

signal to the display or by pressing the switches. Figure 9A shows a flowchart that describes the

display as selecting one of several VGA (non-interlaced) specifications as well as SVGA, PAL

and NTSC (interlaced). Claims 21 and 22 are fully taught by Song because at column 9 lines 47-

54 Song describes in the alternative the PAL mode, the NTSC mode and the VGA mode and

because switch 7 when switched to interlaced signal does not let the noninterlaced computer

signal to pass.

The following detailed analysis of the claims illustrates why Song anticipates applicants claimed

invention.

Pending claim 1	Song et al., U.S. Patent No. 6,046,721
A display apparatus for use with a host computer system, the display apparatus comprising circuitry allowing an interlaced mode of operation and a noninterlaced mode of operation, the display apparatus comprising:	Song describes a display that is used to display both a non-interlaced computer signal and an interlaced television signal. The display automatically configures itself to the source of the signals applied to the display, (column 9, line 47 – column 10, line 26).
a screen,	CRT 4

said screen operable to display visually detectable output from the host computer system when operating in the noninterlaced mode of operation and	Column 1 lines 5-8 and column 9 line 54.
operable to display a television compatible signal when operating in the interlaced mode of operation;	Column 1 lines 5-8 and column 9 line 53.
a communication channel between said host computer system and said display apparatus,	The VGAFP line (figure 1) is a communication channel between the computer and the display apparatus.
the communication channel for transmitting commands and information to and from said host computer system and said display apparatus; and	
a microprocessor for receiving commands from said host computer system,	MCU 9 performs the program illustrated in figure 9A and described at column 9 lines 47-67.
said microprocessor comprising control logic for switching said display apparatus between said interlaced and noninterlaced modes of operation in response to said commands.	

Song did not expressly disclose the communication channel for transmitting commands and information to and from said host computer system and to and from said display apparatus, but Song does disclose sending a command from the computer to the display (Figure 1).

Mastronardi discloses a touch-screen interface module in where a user presses his/her finger against the screen to transfer controls/information to the computer from the display (paragraph 66), which sends a command from the display to the computer. Hallberg discloses a video adapter driver program can be used to allow a user to toggle between various display modes (column 10, line 67 – column 11, line 4), which provides a graphical user interface for the user. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Song's system by incorporating a touch-screen monitor that allow users to select which

mode the user desired through a graphical user interface program in where when a user selects

the desired mode, a command is sent to the computer from the touch-screen monitor and a

command is sent from the computer to the display to change the mode of display. One would be

motivated to do so because a touch-screen monitor is one less interface device a user can use

without a mouse and a keyboard while being able to send commands to the computer from the

display and a graphical user interface program allow users to conveniently see the selection of a

mode the user desired on the touch screen. Song did not expressly disclose microprocessor

comprising control logic for switching said display apparatus between said interlaced and

noninterlaced modes of operation in response to said commands, but Song did disclose MCU 9

and the program of figure 9A switches the display from displaying television display signals

(interlaced) and computer display signals (non interlaced). Iwaki discloses a MUX that switches

between interlace and non-interlace modes (Figure 1). It would have been obvious for one of

ordinary skill in the art at the time of the invention to modify Song's, Mastronardi's and

Hallberg's systems to have a multiplexer that receives a command to switch between interlace

and non-interlace modes instead of using two switches. One would be motivated to do so

because this allows smaller circuitry, which potentially saves space. Song also did not expressly

disclose overlay windows. Ersoz discloses a 4x3 video being overlaid on top of a 16x9 video

(Figure 1(c)). It would have been obvious for one of ordinary skill in the art at the time of the

invention to further modify Song's, Mastronardi's, Hallberg's, and Iwaki's systems to include

overlay windows. One would be motivated to do so because this provides picture-in-picture

options and the viewing of multiple desired data.

Claim 2:

| Pending claim 2 | Song et al., U.S. Patent No. 6,046,721 |

A display apparatus of claim 1,	See the above analysis of claim 1.
wherein said interlaced mode of operation supports NTSC input.	Figure 9A shows a NTSC system control MOD5 decision block and column 9 lines 53-54 describes an NTSC mode.

Claim 3:

Pending claim 3	Song et al., U.S. Patent No. 6,046,721
A display apparatus of claim 1,	See the above analysis of claim 1.
wherein said noninterlaced mode of operation supports at least one of a computer graphics mode input, VGA input and SVGA input.	Column 3 line 20 describes VGA.

Claim 13:

Pending claim 13	Song et al., U.S. Patent No. 6,046,721
A computer system comprising:	Figure 1
a host computer system including:	Computer C
a processor;	Computers have processors which allow the computer to compute.
a memory coupled to said processor;	Computers have memory which assist the computer to compute.
a video controller coupled to said processor and said memory; and	Computer C outputs VGA, thus, inherently it has a video controller coupled to the processor and memory.
a display apparatus coupled to a video controller of the host computer system,	The remainder of figure 1 not with computer C and Television TV is the display apparatus.
the display apparatus comprising circuitry allowing an interlaced mode of operation and a noninterlaced mode of operation, the display apparatus comprising:	Song describes a display that is used to display both a non-interlaced computer signal and an interlaced television signal. The display automatically configures itself to the source of the signals applied to the display, (column 9, line 47 – column 10, line 26).
a screen,	CRT 4

said screen operable to display visually detectable output from the host computer system when operating in the noninterlaced mode of operation and operable to display a television compatible signal when operating in the interlaced mode of operation;	Column 1 lines 5-8 and column 9 line 54.
a communication channel between said host computer system and said display apparatus,	The VGAFP line (figure 1) is a communication channel between the computer and the display apparatus.
the communication channel for transmitting commands and information to and from said host computer system and said display apparatus; and	
a microprocessor for receiving commands from said host computer system,	MCU 9 performs the program illustrated in figure 9A and described at column 9 lines 47-67.
said microprocessor comprising control logic for switching said display apparatus between said interlaced and noninterlaced modes of operation in response to said commands.	

Song did not expressly disclose the communication channel for transmitting commands and

information to and from said host computer system and to and from said display apparatus, but

Song does disclose sending a command from the computer to the display (Figure 1).

Mastronardi discloses a touch-screen interface module in where a user presses his/her finger

against the screen to transfer controls/information to the computer from the display (paragraph

66). Hallberg discloses a video adapter driver program can be used to allow a user to toggle

between various display modes (column 10, line 67 – column 11, line 4). It would have been

obvious for one of ordinary skill in the art at the time of the invention to modify Song's system

by incorporating a touch-screen monitor that allow users to select which mode the user desired

through a user interface program in where when a user selects the desired mode, a command is

sent to the computer from the touch-screen monitor and a command is sent from the computer to

the display to change the mode of display. One would be motivated to do so because a touch-

screen monitor is one less interface device a user can use without and a mouse and a keyboard

while being able to send commands to the computer from the display and a user interface

program allow users to conveniently see the selection a mode the user desired on the touch

screen. Song did not expressly disclose microprocessor comprising control logic for switching

said display apparatus between said interlaced and noninterlaced modes of operation in response

to said commands, but Song did disclose MCU 9 and the program of figure 9A switches the

display from displaying television display signals (interlaced) and computer display signals (non

interlaced). Iwaki discloses a MUX that switches between interlace and non-interlace modes

(Figure 1). It would have been obvious for one of ordinary skill in the art at the time of the

invention to modify Song's, Mastronardi's and Hallberg's systems to have a multiplexer that

receives a command to switch between interlace and non-interlace modes instead of using two

switches. One would be motivated to do so because this allows smaller circuitry, which

potentially saves space. Song also did not expressly disclose overlay windows. Ersoz discloses

a 4x3 video being overlaid on top of a 16x9 video (Figure 1(c)). It would have been obvious for

one of ordinary skill in the art at the time of the invention to further modify Song's,

Mastronardi's, Hallberg's, and Iwaki's systems to include overlay windows. One would be

motivated to do so because this provides picture-in-picture options and the viewing of multiple

desired data.

Regarding dependent claims 38 and 40, Song did not expressly disclose an overlay

window is displayed on at least one overlay screen that is posiitionable anywhere over at least

one underlying screen as desired by a user. Ersoz discloses the inset picture can be displayed in

many different positions (column 4, line 8 – 15 and Figure 1(c)) and that it is inherent that a user,

at least a programmer, can position the inset window anywhere on the screen, even if the

computer handles the positioning of the window, it's the user that controls the computer to

function. It would have been obvious for one of ordinary skill in the art at the time of the

invention to further modify Song's, Mastronardi's, Hallberg's, Iwaki's, and Ersoz's systems to

allow user to position the overlay window anywhere on the screen. One would be motivated to

do so because this would allow the user to not block important information that could be under

the overlay window while displaying additional information on the overlay window.

Claim 14:

Pending claim 14	Song et al., U.S. Patent No. 6,046,721
A computer system of claim 8,	
Wherein said noninterlaced mode of operation supports at least one of computer graphics mode input, VGA input and SVGA input.	Column 3 line 20 describes VGA.

Regarding claims 2 and 3, claims 2 and 3 are fully taught by Song because at column 9

lines 47-54 Song describes in the alternative the PAL mode, the NTSC mode and the VGA mode

and because switch 7, when switched to interlaced signal, does not let the noninterlaced

computer signal to pass.

Regarding claim 9, Song describes a display that is used to display both a non-interlaced

computer signal and an interlaced television signal and the display automatically configures itself

to the source of the signals applied to the display, (column 9, line 47 – column 10, line 26) and

sending a command from the computer to the display (Figure 1), which reads on the claimed

command is a display mode change command.

Regarding claim 27, Song teaches a display apparatus of claim 27, wherein the command

is sent over a data port (since the claim does not define a data port then any port that conveys the

display mode change command is a data port).

Regarding claim 8, claim 8 adds to claim 1 wherein said interlaced mode of operation

supports Sequential a Memoire (SECAM) input. This TV standard is one of two standards used

in Europe the other being PAL. Song teaches setting the monitor into the PAL mode (column 5,

lines 20 – 38) but does not explicitly teach setting the monitor into the SECAM mode. Since the

SECAM standard is old (1967) and well known (used in France and Eastern Europe) it would

have been obvious to one of ordinary skill in the at the time of applicants invention to select in

Song's system the SECAM standard since Song selects another European standard the PAL

standard (western Europe and Australia) in addition to the NTSC standard and computer

standards, thus, allowing the modified system to display video from a greater number of regions

of the world.

Regarding claims 12 and 28, Ersoz discloses PIP (Figure 1(f)), which reads on the

claimed overlay window is enabled as at least one of a picture-in-picture (PIP) and a picture-on-

picture (POP). It would have been obvious for one of ordinary skill in the art at the time of the

invention to further modify Song's system to include overlay windows. One would be motivated

to do so because the viewing of multiple desired data.

Regarding claim 23 and 24, claims 23 and 24 are similar in scope as to claims 2 and 9,

thus the rejections for claims 2 and 9 hereinabove is applicable to claims 23 and 24.

Claims 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (US 6,046,721) in view of Iwaki (US 6,567,097) and Ersoz et al. (US 5,287,189) and Mastronardi (US 2002/0126141) and Hallberg (US 6,417,867) and Gough et al. (US 6,072,489).

Regarding dependent claims 39 and 41, Song did not expressly disclose the computer system permits utilization of other computer functions on at least one of underlying screens of the overlay window. Gough discloses overlay windows 62 and 70 over a screen 60 in where other computer functions are allowable, such as the desktop (Figures 3a and 3b). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Song's, Mastronardi's, Hallberg's, Iwaki's, and Ersoz's systems to allow computer functions to operate with an overlay window present. One would be motivated to do so because this allow users to multi-task and allow users to utilize the whole screen.

Claims 4 – 7, 15 – 18, 29 –37, 42, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (US 6,046,721) in view of Iwaki (US 6,567,097) and Ersoz et al. (US 5,287,189) and Mastronardi (US 2002/0126141) and Hallberg (US 6,417,867) and York (US 5,850,340).

Regarding claims 4 and 15, claim 4 adds to claim 1 wherein the microprocessor receives at least one command from said host computer system, the command suitable for controlling a television function of the display apparatus from the host computer system, wherein the television function includes at least one of changing a channel, volume adjustment and picture adjustment. Claim 15 adds the same limitations to claim 13.

Song does not teach controlling at least one of changing a channel, volume adjustment and picture adjustment of the display apparatus in response to computer commands.

York teaches changing a channel of the display apparatus in response to computer commands at column 1 lines 34-48, column 6 lines 30-33, and column 8 lines 40-44, controlling volume adjustment at column 8 line 43, muting is volume adjustment, and controlling picture adjustment at column 1 lines 34-35 since to fully control a television is to control picture adjustment such as brightness, contrast, color, ect.

It would have been obvious to one of ordinary skill in the art at the time of applicants invention to modify Song in order for Song's display to receive computer commands that control at least one of changing a channel, volume adjustment and picture adjustment of the display apparatus because this is a user friendly approach since the computer displays computer generated images on the television monitor it would be easier for the user to control the television from the computer rather than to leave the computer's input devices and retrieve the television's remote control or use the television's control buttons.

Regarding claims 5 and 16, claim 5 adds to claim 1 wherein the microprocessor receives at least one command from said host computer system, the command suitable for controlling a television function of the display apparatus from the host computer system, wherein the television function includes at least one of selecting a video source, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume Song: column 2, line 15 – 19), refresh rate, resolution and color temperatures. Claim 16 adds the same limitations to claim 13.

Regarding claims 29 and 34, Song describes a display that is used to display both a non-interlaced computer signal and an interlaced television signal. The display automatically

configures itself to the source of the signals applied to the display, (column 9, line 47 – column

10, line 26). The display also responds to user input via buttons S101 and S102 of figure 8.

Thus, the user commands the display to be in one mode or another by having either the computer

send a display signal to the display or by pressing the switches. Figure 9A shows a flowchart

that describes the display as selecting one of several VGA (non-interlaced) specifications as well

as SVGA, PAL and NTSC (interlaced). Newly added claims 21 and 22 are fully taught by Song

because at column 9 lines 47-54 Song describes in the alternative the PAL mode, the NTSC

mode and the VGA mode and because switch 7 when switched to interlaced signal does not let

the noninterlaced computer signal to pass.

The following detailed analysis of the claims illustrates why Song anticipates applicants claimed

invention.

Pending claims 29 and 34	Song et al., U.S. Patent No. 6,046,721
A display apparatus for use with a host computer system, the display apparatus comprising circuitry allowing an interlaced mode of operation and a noninterlaced mode of operation, the display apparatus comprising:	Song describes a display that is used to display both a non-interlaced computer signal and an interlaced television signal. The display automatically configures itself to the source of the signals applied to the display, (column 9, line 47 – column 10, line 26).
a screen,	CRT 4
said screen operable to display visually detectable output from the host computer system when operating in the noninterlaced mode of operation and	Column 1 lines 5-8 and column 9 line 54.
operable to display a television compatible signal when operating in the interlaced mode of operation;	Column 1 lines 5-8 and column 9 line 53.

a communication channel between said host computer system and said display apparatus,	The VGAFP line (figure 1) is a communication channel between the computer and the display apparatus.
the communication channel for transmitting commands from said host computer system to said display apparatus; and	Column 9 lines 47-67 and figure 9A describes determining the frequency and polarity of the horizontal and vertical sync signals (VGAFP and TVFP) from the computer and TV source. Clearly when VGAFP is present the computer is communicating the presence of a display signal to the monitor (see circuit of figure 1) and thus commanding the monitor to synchronize to the computer display signal.
a microprocessor for receiving commands from said host computer system,	MCU 9 performs the program illustrated in figure 9A and described at column 9 lines 47-67.
said microprocessor comprising control logic for switching said display apparatus between said interlaced and noninterlaced modes of operation in response to said commands.	

Song did not expressly disclose microprocessor comprising control logic for switching said

display apparatus between said interlaced and noninterlaced modes of operation in response to

said commands, but Song did disclose MCU 9 and the program of figure 9A switches the display

from displaying television display signals (interlaced) and computer display signals (non

interlaced). Iwaki discloses a MUX that switches between interlace and non-interlace modes

(Figure 1). It would have been obvious for one of ordinary skill in the art at the time of the

invention to modify Song's system to have a multiplexer that receives a command to switch

between interlace and non-interlace modes instead of using two switches. One would be

motivated to do so because this allows smaller circuitry, which potentially saves space. Song

also did not expressly disclose overlay windows. Ersoz discloses a 4x3 video being overlaid on

top of a 16x9 video (Figure 1(c)). It would have been obvious for one of ordinary skill in the art at the time of the invention to further modify Song's system to include overlay windows. One would be motivated to do so because this provides picture-in-picture options and the viewing of multiple desired data. Song does not teach controlling at least one of selecting a video source, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution and color temperatures of the display apparatus in response to computer commands. York teaches selecting a channel (video source) of the display apparatus in response to computer commands at column 1 lines 34-48, column 6 lines 30-33, and column 8 lines 40-44, and controlling picture adjustment at column 1 lines 34-35 since to fully control a television is to control television features such as brightness, contrast, vertical and horizontal size, on/off, and color, ect. It would have been obvious to one of ordinary skill in the art at the time of applicants invention to modify Song in order for Song's display to receive computer commands that control at least one of selecting a video source, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), and color temperatures of the display apparatus because this is a user friendly approach since the computer displays computer generated images on the television monitor it would be easier for the user to control the television from the computer rather than to leave the computer's input devices and retrieve the television's remote control or use the television's control buttons.

Regarding claim 6 and 17, Song describes a display that is used to display both a non-interlaced computer signal and an interlaced television signal and the display automatically configures itself to the source of the signals applied to the display (column 9, line 47 – column

10, line 26), which reads on the television function feature of the display apparatus is controlled from the host computer system while the display apparatus is in an interlaced mode of operation.

Regarding claim 7, claim 7 adds to claim 1 wherein the microprocessor is suitable for switching said display apparatus between said interlaced and noninterlaced modes of operation. Song teaches this at column 9 lines 47-54, and it is known that NTSC is interlaced and VGA is noninterlaced.

Regarding claims 30 and 35, claim 30 adds to claim 29 wherein said interlaced mode of operation supports NTSC input. Claim 35 adds the same limitations to claim 34. Song teaches NTSC input at column 8 line 63 and column 9 lines 24 and 53.

Regarding claim 31, claim 31 adds to claim 30 wherein said display apparatus is transitioned to said second mode of operation from said first mode of operation, a video signal from a video controller in said first mode is not displayed by said display apparatus. Song teaches this since when the display apparatus is transitioned from interlaced, TV, to noninterlaced, computer, the interlaced signal is not displayed by the display apparatus.

Regrarding claim 32, Song describes a display that is used to display both a non-interlaced computer signal and an interlaced television signal and the display automatically configures itself to the source of the signals applied to the display, (column 9, line 47 – column 10, line 26) and sending a command from the computer to the display (Figure 1), which reads on the claimed command is a display mode change command.

Regarding claim 18, claim 18 is similar in scope as to claim 31, thus the rejection for claim 31 hereinabove is applicable to claim 18.

Regarding claim 36, the combination of Song's, Iwaki's, and Ersoz's systems reads on

claim 36, which reads on the claimed microprocessor is suitable for switching said display

apparatus between said interlaced and noninterlaced modes of operation. Song did not expressly

disclose microprocessor comprising control logic for switching said display apparatus between

said interlaced and noninterlaced modes of operation in response to said commands, but Song

did disclose MCU 9 and the program of figure 9A switches the display from displaying

television display signals (interlaced) and computer display signals (non interlaced). Iwaki

discloses a MUX that switches between interlace and non-interlace modes (Figure 1). It would

have been obvious for one of ordinary skill in the art at the time of the invention to modify

Song's system to have a multiplexer that receives a command to switch between interlace and

non-interlace modes instead of using two switches. One would be motivated to do so because

this allows smaller circuitry, which potentially saves space.

Regarding claims 33 and 37, Ersoz discloses PIP (Figure 1(f)), which reads on the

claimed overlay window is enabled as at least one of a picture-in-picture (PIP) and a picture-on-

picture (POP). It would have been obvious for one of ordinary skill in the art at the time of the

invention to further modify Song's system to include overlay windows. One would be motivated

to do so because the viewing of multiple desired data.

Regarding dependent claims 42 and 44, Song did not expressly disclose an overlay

window is displayed on at least one overlay screen that is posiitionable anywhere over at least

one underlying screen as desired by a user. Ersoz discloses the inset picture can be displayed in

many different positions (column 4, line 8 – 15 and Figure 1(c)) and that it is inherent that a user,

at least a programmer, can position the inset window anywhere on the screen, even if the

computer handles the positioning of the window, it's the user that controls the computer to function. It would have been obvious for one of ordinary skill in the art at the time of the invention to further modify Song's, Mastronardi's, Hallberg's, Iwaki's, and Ersoz's systems to allow user to position the overlay window anywhere on the screen. One would be motivated to do so because this would allow the user to not block important information that could be under the overlay window while displaying additional information on the overlay window.

Claims 43 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (US 6,046,721) in view of Iwaki (US 6,567,097) and Ersoz et al. (US 5,287,189) and Mastronardi (US 2002/0126141) and Hallberg (US 6,417,867) and York (US 5,850,340) and Gough et al. (US 6,072,489).

Regarding dependent claims 43 and 45, Song did not expressly disclose the computer system permits utilization of other computer functions on at least one of underlying screens of the overlay window. Gough discloses overlay windows 62 and 70 over a screen 60 in where other computer functions are allowable, such as the desktop (Figures 3a and 3b). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Song's, Mastronardi's, Hallberg's, Iwaki's, York's and Ersoz's systems to allow computer functions to operate with an overlay window present. One would be motivated to do so because this allow users to multi-task and allow users to utilize the whole screen.

Claims 10, 11, 19 – 22, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (US 6,046,721) in view of Iwaki (US 6,567,097) and Ersoz et al.

(US 5,287,189) and Mastronardi (US 2002/0126141) and Hallberg (US 6,417,867) and York (US 5,850,340) and McGraw (US 6,300,980).

Claim 19 adds to parent claim 13 wherein the video controller receives a signal from the display apparatus. Song does not describe having the video controller of the computer receive a signal from the monitor. Applicant describes the video controller as being capable of receiving two different types of signal from the display apparatus. The first indicates the current operational mode of the display to the host system after polling by the host system. The second is analog video sent to the video capture circuitry 226 of video controller 202. This claim broadly covers both signals, thus, a prior art reference showing one of the two is sufficient to reject the claim. McGraw teaches at column 16 lines 43-60 polling the monitor and having the monitor respond to the polling by sending a signal to the computer system. The portion of the computer that receives this signal is broadly a part of the video controller since this signal controls the video output by the video controller. Column 14 line 65 to column 15 line 7. Thus, it would have been obvious to one of ordinary skill in the art at the time of applicants invention to modify Song to allow Song to receive a signal from the display apparatus so Song's system will know the capabilities of the display apparatus in order to ensure proper video signals are sent to the display apparatus.

Regarding claims 20 – 22, Iwaki discloses a composite video signal and s-video signal (column 7, lines 34 – 49), which reads on the claimed video signals is a composite signal and S-video signal.

Regarding claims 10, 11, 25, and 26, Song does not teach sending the commands which determine the mode the monitor operates, interlaced mode or noninterlaced mode, over serial or

parallel busses. McGraw teaches at column 2 line 3 a RS 232 serial bus and at lines 35-37 states other types of digital communication links may be used. Thus, it would have been obvious to one of ordinary skill in the art at the time of applicants invention to modify Song to allow Song to send a display mode command from the display apparatus on serial or parallel busses to the display apparatus so display mode commands, which are digital, need not be derived from the horizontal and vertical sync signals, which are analog, thus simplifying the transmission and reception of the display mode commands.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey J. Chow whose telephone number is (571)272-8078. The examiner can normally be reached on Monday - Friday 10:00AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJC

ULKA CHAUHAN

SUPERVISORY PATENT EXAMINER